

IPCRG practice driven answers on COVID-19 and respiratory questions



Can previous COVID vaccinations immunise against the newest OMICRON strain?

What the research says

Currently approved vaccines directed against the original SARS-CoV-2 strains offer protection against severe COVID-19 illness, hospitalisation and death associated with the OMICRON variant (Kulper-Schiek et al 2022; Meggiolaro et al 2022; Menegale et al 2022; Reza Pratama et al 2022; Zeng et al 2022). Protection against the OMICRON variant appears less robust than offered against the earlier variants and appears to wane more rapidly. Booster doses have been shown to restore protection against severe COVID-19 illness associated with the OMICRON variant in people aged ≥ 60 years and at-risk populations (Bar-On et al 2022; Magen et al 2022). Second booster doses can reduce the breakthrough infection rate even when the Omicron variant is the predominant circulating variant (Cohen et al 2022).

While currently approved vaccines continue to elicit an antibody response (Munro et al 2022), the resultant antibodies are less effective against the Omicron variant (Hein et al 2022). Vaccines with specificity against both the original strains and the OMICRON variant are under regulatory review and have been approved in a number of countries including Canada (Government of Canada 2022), the UK (MHRA 2022) and the US (Pfizer 2022). In September 2022, the ECDC-EMA have authorised the use of Comirnaty

Original/Omicron BA.1 and Spikevax Bivalent Original/Omicron BA.1 in the EU (ECDC-EMA 2022). It remains controversial whether high risk patients should wait for a bivalent vaccination to be available or should receive the most current vaccine available as a booster dose to benefit from the best available protection.

What this means for your clinical practice

- Continue to encourage patients, especially those at increased risk for more severe illness from SARS-CoV-2 infection, to consider additional COVID-19 booster vaccinations as recommended in your National Guidelines

Useful links and supporting references

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Munro APS, et al. Safety, immunogenicity, and reactogenicity of BNT162b2 and mRNA-1273 COVID-19 vaccines given as fourth-dose boosters following two doses of ChAdOx1 nCoV-19 or BNT162b2 and a third dose of BNT162b2 (COV-BOOST): a multicentre, blinded, phase 2 randomised trial. *Lancet Infect Dis* 2022;22:1131–41. Available at: <https://pubmed.ncbi.nlm.nih.gov/35550261/>. Accessed September 2022.

Pfizer. Press release: Pfizer and BioNTech granted FDA emergency use authorization of Omicron BA.4/BA.5-adapted bivalent COVID-19 vaccine booster for ages 12 years and older. 31 August 2022. Available at: <https://www.pfizer.com/news/press-release/press-release-detail/pfizer-and-biontech-granted-fda-emergency-use-authorization>. Accessed September 2022.

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